2: Hockings E-4,5 (1962-1977) 1980
AW50 Badaga AW50

105 division between nature and society was expressed in a variety of ways. Clearest perhaps was the ethical prescription that while it is evil for a Badaga to kill people he does good in the eyes of the community *and of God* if he kills Kurumbas or tigers, 'since these (181) are both murderers' (as the matter was once explained to me). The Badagas have always been what would popularly be termed a most superstitious people: they suspect the sorcerer's artifice behind every noise in the jungle, every unexplained malady, every strange event; and they glean a multitude of tidings, both good and bad, from the everyday behaviour of snakes, crows, jackals, cattle and dozens of other creatures and conditions that surround (681) them. A further indication of the gulf between nature and society is perhaps that in their pre-British law the severest Badaga punish- (684) ment short of hanging was ostracism—expulsion from the village; and this was reserved for the enormity of incest.[2]

121 For an Indian peasant society the Badagas have some quite extraordinary features, fit to provide enough exotica for any undergraduate anthropology course. This fact has not been duly appreciated by the dozens of ethnologists who have come to the Nilgiris and attached themselves with passion to the colourful Todas or the shy jungle tribes. The Badagas may outwardly appear a much more 'typical' Indian farming community, and yet they do not have true subcastes or multicaste villages; they practise hypergamy *and* hypogamy even across the vegetarian boundary; several forms of polygamy are acceptable; they have a sort of young men's house; marriage is permitted across generation levels to the point where a man may in theory marry a woman *and* her daughter *and* her mother simultaneously, and villages hold a memorial ceremony once in fifty years when every member of a generation has died. Add to these features the frequent ghost exorcisms, fire-walking and occasional massacres, and the anthropologist has much to explain.

THE TERRAIN

101 The Nilgiri Hills, also known as the Blue Mountains, constitute a massif some 1500 sq. km. in area, situated in southern India at the [133] juncture of the three linguistic and cultural areas of Karnataka (631) Malabar and Tamilnad. In the British period it was an administrative unit of the Madras Presidency. Today the Nilgiris form one

2: Hockings E-4,5 (1962-1977) 1980
AN50 Badaga AN50

101 small district of Tamil Nadu, altogether covering 2543 sq. km. This
(630) is the homeland of the Badaga, Toda, Kota and Kurumba communities; nowadays numerous other peoples also live there.

• 133 The plateau is generally in the elevation of 2000–2500 m., and one peak, Doddabetta, among the highest in peninsular India, reaches 2633 m. In contrast to this the western quarter of the district averages around 1000 m. in elevation and forms a major
(361) portion of the Wainad Plateau. The main indigenous communities there are the Panias, Kurumbas, Nayakas and Chettis, but there are also a few Badagas (Wainad Gaudas) and Kotas.

The escarpment of the Nilgiri Plateau falls away very steeply, and on the eastern edge actually drops some 2000 m. in about
(137) 3 km. These slopes always have been covered in dense subtropical
(136) jungle which harbours tigers, leopards, buffaloes, elephants, snakes and malarial mosquitoes, and formerly dangerous hunting tribes
(175) still feared for their sorcery. Until the advent of the British early in the nineteenth century the three communities living on the summit of these hills—Badagas, Kotas and Todas—were therefore extremely isolated.

132 The undulating, unevenly wooded downland making up the entire plateau experiences considerable variation in rainfall. The
(133) Nilgiris receive from 60 to 160 inches of rain annually, depending on the topographical aspect. Western parts of the plateau rely mainly on the southwest monsoon in July and August; the eastern parts derive much of their rain from the northeastern monsoon in October-December. The average mean daily temperature in the centre of the plateau is around 15°C, while in the Wainad the climate is much hotter and wetter.

175 For the mildly invigorating qualities of its climate the plateau is
177 therefore scarcely rivalled anywhere in the Asian tropics, and from 1819 British residents began to take advantage of this healthful
(361) region. Soon the towns of Coonoor, Kotagiri and Ootacamund (the district headquarters), and the military station at Wellington, took shape and expanded. More recently the town of Gudalur (Gudalu:ru) has grown up in the Wainad, at the foot of the western
(630) escarpment. Ootacamund, Coonoor and Gudalur are now the headquarters of the three administrative divisions or *taluks* into which the district was divided by the British.

THE NILGIRI POPULATION

When the British began to settle on the plateau they brought with

2: Hockings E-4,5 (1962-1977) 1980
AW50 Badaga AW50

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Map 1. Map to illustrate the migrations of the Badagas.

615 realm in 1613. Badaga Wodeas now claim to have come with this man and to be descended through him from the royal house of Mysore (Grigg, 1880, 218, 220, 225; Natesa Sastri, 1892, 754–755; Rice 1897, vol. II, 296, 364; Hayavadana Rao, 1930, vol. V, 862). Some came from the Lingayat monastery at Angala and first settled at a subsequently deserted village called Ukkupalle, near

2: Hockings E-4,5 (1962-1977) 1980
AN50 Badaga AN50

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961
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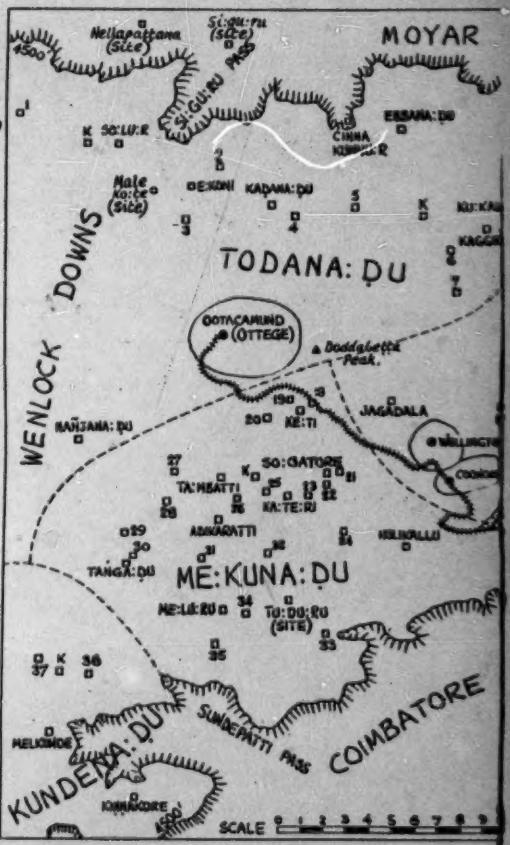


Map 2. The Nilgiri Plateau

Key: K Kota villages; 19 Aććanakal; 28 Ba:kola; 10 Beragani; 37 Bikkaṭṭi; 15 Da:bakambe; 31 De:vaso:le (bazaar); 8 Dimbuṭṭi; 17 Eḍapaḷḷi; 6 Hajju:r; 30 Ha:lakore; 4 Ha:laṭṭi; 7 Honatale; 18 Hulla:ḍa; 2 Hullaṭṭi; 3 Kallaṭṭi; 9 Kappaṭṭi; 20 Kereha:da; 32 Koḍe:ru; 33 Kolekombe (bazaar); 29 Manihaṭṭi; 35 Manjekombe; 36 Manju:ru; 34 Me:lu:ru Hosa:ṭṭi; 26 Muttina:ḍu; 16

[p.24]

Nellitore; 21 Ne:rikambe; 27 Nunduwa; 1 O:nṭow (Toda temple); 25 O:ranayi; 22 Sakkalaṭṭi; 14 Sakkata; 24 Se:las (bazaar); 13 So:lu:rmaṭṭa (bazaar); 11 Sulligu:du; 12 Tumbimale; 5 Tu:ne:ri; 23 Tu:raṭṭi. Villages that head COMMUNES are marked on the map by name; as also are modern TOWNS. Old *fortresses* are indicated in italics.

[p. 25]

AN50 Badaga AN50

to spit in the proper place.' With this attitude prevalent, the spread of various viruses and of *Mycobacterium tuberculosis* has been greatly curtailed. The regular washing of the body and shaving of pubic hair have also contributed to health by restricting the incidence of bodily fungi and lice-borne diseases.

The ecological significance of these various beliefs and practices is that as the Nilgiri population increased in the nineteenth century and some village streams began to be polluted by this new pressure, the Badagas managed to avoid some contamination by switching from drinking stream water and fresh milk to tea, coffee and sometimes alcohol, all of which would be relatively free of bacterial organisms. The new balance with the environment that this change brought about was certainly one factor in the remarkable increase in the Badaga population since the advent of the British (Appendix 2).

At the same time that this change in drinking habits was occurring their eating habits were undergoing an equally radical transformation. In part this was due to the several dozen types of fruit, grain and vegetable introduced from Europe by British settlers and adopted by most Badagas. The variety of their diet was thus greatly increased.

VILLAGE NAMES

A study of the present Badaga hamlet names yields a body of insights about the early settlements formed during the two and a half centuries preceding the first British report (Keys, 1812).

Perhaps a somewhat lyrical description of the Nilgiri Plateau may at this point aid the reader's understanding of what is to follow:

> The plateau is a true tableland, its average height being very uniform. But there is not a square mile of level ground in the whole of it, its surface being broken by endless undulations which in places swell into considerable and distinct ranges. It rises most abruptly from the plains below it; and on the west, above the Ouchterlony Valley and southwards, its sides are often sheer, bare walls, hundreds of feet in height and too steep even for trees to obtain a footing on them. Elsewhere dense forest covers almost the whole of its slopes . . .
>
> It is first of all divided east and west into two fairly equal but

2: Hockings E-4,5 (1962-1977) 1980
AN50 Badaga AN50

dissimilar parts by a range of heights running north and south of which Dodabetta ('big mountain') is the tallest . . .

East and south of the Dodabetta range . . . the plateau . . . is extensively cultivated by the immigrant tribe known as the Badagas. This does not improve its appearance; the great forests have mostly been felled and their place taken by the poorest low scrub or by fields of miserable cereals surrounding the squat red-tiled houses of numerous hamlets; the country is deeply scoured by every shower of rain until the infertile red and yellow sub-soil clays are laid bare; and, owing to the Badagas' former custom of shifting their cultivation from year to year to new patches of land, grass has been prevented from getting any firm hold on the denuded hill-sides. Only on the slopes of the plateau (which are too steep for cultivation) and in a few isolated Government reserves, does the forest flourish in its virgin beauty.

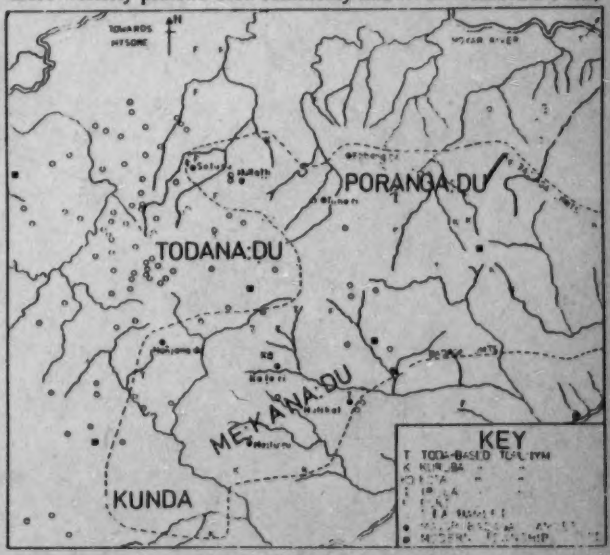
West of Dodabetta, however, the Badagas are more rare; hardly a field or a village (except the little clusters of huts belonging to the pastoral Tódas) is to be seen; and the country consists of a sea of rounded green hills, rising now and again into more prominent heights and ranges, which are covered with short grass . . . These rounded hills are divided each from each by streams or bogs, and nestling in their wrinkles are beautiful little woods, . . . the edges of which have been so sharply defined by years of grazing and (perhaps) grass fires that they look almost like artificial plantations. . . .(Francis, 1908, 3–5).

A few of the village names defy any interpretation—either by me or by my best informants—probably because they have changed too much to be recognizable now as Baḍagu substantives. But leaving these aside we still have in the list of toponyms which follows a corpus of 311 meaningful toponyms for a community of about 362 hamlets, 18 of them no longer occupied. Some toponyms are repeated in several places, (e.g., Naḍuhaṭṭi, 'middle hamlet', or Hosaṭṭi, 'new hamlet'); numbers given after some explanations indicate where such a toponym occurs more than once in the Nilgiris. We will now examine the meanings of the toponyms, which are given here in a phonemic transcription of Badagu (a Dravidian language).

2: Hockings E-4,5 (1962-1977) 1980
AW50 Badaga AW50

with a council from the three resident tribes: 'Because of the trouble that the Mohammedan made for us we have come, making ourselves to escape. This country is yours. We are helpless. You must help us.' (Emeneau, 1946, 257; cf. Ouchterlony, 1848, 81) The Toda sites they were given may have been uninhabited religious centers and unoccupied hamlets belonging previously to Toda clans that had died out.[7] The Kurumba sites were more probably relinquished to the Badagas only after the latter had committed some atrocities against the Kurumba sorcerers alleged to live in them. The burning of Kurumba hamlets was certainly a fairly common act of frightened Badagas during the nineteenth century, and numerous instances of it have been recorded by contemporary writers.

As an effect of the peaceful Badaga incursion, we can now identify with the help of a map (Map 3) some micro-environmental differences in the settlement patterns of Badagas, Todas and Kurumbas. The Todas now occupy the higher and more westerly plateau area commonly known as Wenlock Downs,



Map 3 Nilgiri place-names

2: Hockings E-4,5 (1962-1977) 1980
AW50 Badaga AW50

given up almost wholly to the plough or hoe, were once covered with dense jungle, except the more stony ridges and heights. This is evidenced by the numerous shóla trees, single or in groups of two or three, standing generally near a rock or stream, which have owed their escape from the general destruction to the superstitious fears of the people, who regard them as the homes of the unseen genii of the place. The frequent occurrence of the suffix *kâd*, jungle or forest, in names of localities, where now hardly a tree is to be found, is additional proof... (Grigg, 1880, 9).

This pronounced ecological change has generated a number of studies exploring the likelihood that the more westerly grasslands now occupied by the Todas were also originally heavily forested areas that succumbed to annual fires started by these herdsmen (e.g., Noble, 1967; Blasco 1971). While that question is of little significance in our present study, it does emphasize the manner in which ecological change may be so devastating as to alter the environment almost beyond recognition after a toponym has been assigned to a site there.

NOTES

1. The + used in these lists merely links the morphemes in a word, and is not to be considered as a symbol of juncture. Numbers in parentheses indicate the number of times a toponym is repeated.
2. On cold nights frost can form.
3. Euphony is an important feature of Badaga speech and is a characteristic in hundreds of their proverbs; e.g.,
   hattu jina sa:la/
   ten days debt,
   ondu jina su:la
   one day venereal disease:
   i.e., 'For ten days it will be a debt, but one day it will become a venereal sore.'
4. These were Tu:ḍu:ru, Kaṇaṭṭi, Kolekombe, Kuriyamale, Bekode, Tuha:ḍa, Hatare, Malligo:re, Tiḍḍere, Kaggeri, Hayu:ru, Koṅamotta, Ha:laṭṭaṇe, Ha:la:ḍa, Honnimaṇṇu, Baṇahaṭṭi, and Gonne:ri. Since these names are almost unknown to present-day Badagas we cannot be precise about their pronunciation or meaning.
5. Remnants of this population now live in nearby Ko:ḍe:ru and can still recall something of their history.
6. These latter were named Beṭṭaṭṭi, Koṭaṭṭi, Kareko:ṭe, Banahaṭṭi, Ta:veka:ḍu, Benḍaṭṭi, and Pannamaḍai.
7. During the past century there have been several well-documented cases of Toda hamlets being abandoned.
8. It may be recalled that the Nilgiri Plateau rises to an elevation of 2634 meters in Doḍḍabeṭṭa, 'Great Mountain'.

[p. 70 is blank]

21 Hockings E-4,5 (1962-1977) 1980
AW50 Badaga AW50

Kurumba headman should notify the Kota headman that they will be playing at a certain Badaga village; and the Badaga inviting them should first get permission from the Kota headman to do so.[22] This set of rules is no longer followed since the feelings of Kota headmen are not respected now that Badaga/Kota relations have in general been broken off.

Until the 1930s when the institution of commune watchman began to lose currency, the Kurumba got a quarter rupee each month for every pair of oxen in the commune, or more often its equivalent in grain.[23] At harvest time he would also receive the same sum or else six litres of new grain collected from the villagers by the headman's assistant. In addition he and his family would be fed whenever in the commune.[24] The Kurumba could also rely on Badagas to satisfy all of his clothing needs, for which purpose the headman would first collect grain from the villagers with which to purchase the cloth by barter from the visiting Chetti trader. An early claim (Harkness, 1832, 109, note) that the commune Kurumba could inherit a Badaga's estate when there were no traceable heirs has never been recorded since and would not be possible today.

When a Kurumba watchman dies the headman of the Badaga commune should collect some gifts from the villagers and take them, or have them sent, to the bereaved family. This used to be imperative to secure the goodwill of the family from which the next watchman would also be drawn.

In the pre-British days the Kurumba watchmen got their only salt and crude sugar from Badagas who made annual expeditions to the plains for such needs. These had largely ceased by 1825.

BADAGAS AND IRULAS

The only Badagas having any regular contact with Irulas are those near Ha:sanu:ru and those living in the eastern sector of the Nilgiris. In this latter area Badagas probably—and erroneously—treat the Irulas as a section of the Kurumba tribe, and hence their interrelationship approximates that between Badagas and Kurumbas elsewhere on the plateau.

One of the highest mountains (1788 m.) in that particular area is Rangasa:mi Peak (Metz, 1864, 65–66; Nicholson, 1898, 426–427; Noble, 1976, 124), important in Nilgiri culture because it is crowned by a Vaishnavite shrine (actually two megalithic circles of

2: Hockings E-4,5 (1962-1977) 1980
AW50 Badaga AW50

133●
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[following p. 248-A]

4: Hockings B-5 (1962-1977) 1980
AW50 Badaga AW50

121 society and economy have developed over the centuries. This will not be done here, however, since I have presented the historical data on the community at great length elsewhere (Hockings 1979a; a brief synopsis may be found in Hockings 1972b). If we are to try and understand Badaga society in the way it is now perceived by Badagas and other Indians, then obscure historical references from the seventeenth to the nineteenth centuries cannot be considered relevant information for this study. Instead of turning to old documentary evidence — of which almost none refers to health — I will therefore rely on my own field observations for the most part. (101) These were made during a total of three years of residence among the Badagas (in 1962-1963, 1969-1970, 1972, and 1976-1977).

127 Although there have been several inaccurate accounts of the Badagas left us by early travellers and officials, and there is voluminous material on their evangelization by French, Swiss and German missionaries, general descriptions of the social organization are rare. I can only commend the well-observed paper by Natesa Sastri (1892) and extensive notes by Thurston (1909). Of some use also are the chapters on Badaga economy by Ranga (1934), and an essay on Badaga religion by Samikannu (1922). Several papers by myself may also be of interest. Unfortunately of these few studies none discusses therapy and only Thurston (1909) is readily to be found in most university libraries because his volumes were recently reprinted. By contrast the small Toda tribe has been the subject of well over a hundred books and articles out of a 2,800-item bibliography on the Nilgiris (Hockings, 1978). While the District has been very heavily studied from every conceivable viewpoint, the numerically preponderant community has been almost wholly ignored. General information about the Badagas and the Nilgiri Hills can be found in the scholarly but now out-dated district gazetteers (Grigg, 1880; Francis, 1908; Nambiar 1965). These are also the chief, though inadequate, sources for information about public health in the Nilgiris in the past.

Topography of the District

●133 1.4. It is convenient to think of the Nilgiris as divided into four parts physiographically and ethnically : (1) The Malna:d, or upper plateau, in the elevation range 6,500-8,600 feet. This is pre-eminently the homeland and grazing area for the Todas and their buffaloes.

4: Hockings B-5 (1962-1977) 1980
AW50 Badaga AW50

(2) The lower plateau, ranging from about 5,000 to a peak at 8,640 feet, where over 350 Badaga hamlets are located. (3) The escarpments and lower slopes, primarily the home of the Kurumba and Iruḷa tribes, who are swidden cultivators still practising some hunting and gathering, and important to Badagas for their sorcery. (4) The more westerly Waina:ḍ Plateau, averaging about 3,000 feet in elevation, which is the territory of Kurumbas, Paṇiyas, Maunta:dan and Waina:ḍ Chettis, and of eight hamlets of Badagas, here known as Waina:ḍ Gaudas. Irrigated rice, and tea and coffee, are the most important crops there today.

Since the culture of the Waina:ḍ Gaudas has been dealt with elsewhere (Ranga 1934; Hockings 1979a), and in any case is more like a variant subculture of the Maunta:dan Chettis than like that of the Nilgiri Badagas, I will pay no attention to them in the present study, but confine myself to the Badagas of the Nilgiri Massif.

The environs of these Nilgiri Badagas have been discussed in some detail in a paper on Badaga placenames and cultural ecology (Hockings 1974), and have been accurately described in the following account of the lower and upper plateau:

> The plateau is a true tableland, its average height being very uniform. But there is not a square mile of level ground in the whole of it, its surface being broken by endless undulations which in places swell into considerable and distinct ranges. It rises most abruptly from the plains below it; and on the west. . .its sides are often sheer, bare walls, hundreds of feet in height and too steep even for trees to obtain a footing on them. Elsewhere dense forest covers almost the whole of its slopes.
>
> It is first of all divided east and west into two fairly equal but dissimilar parts by a range of heights running north and south of which Dodabetta ('big mountain') is the tallest. . . .
>
> East and south of the Dodabetta range. . . the plateau. . .is extensively cultivated by the immigrant tribe known as the Badagas. This does not improve its appearance; the great forests have mostly been felled and their place taken by the poorest low scrub or by fields of miserable cereals surrounding the squat red-tiled houses of numerous hamlets; the country is deeply scoured by every shower of rain until the infertile red and yellow sub-soil clays are laid bare; and, owing to the Badagas' former custom of

CHAPTER I

THE GEOGRAPHICAL, HISTORICAL AND ETHNIC SETTING

The Terrain

131 The Nilgiri Hills, once also known as the Blue Mountains, are a plateau some 600 square miles in area, situated in Southern India at the juncture of the three linguistic and cultural areas of Karnatak, Malabar and Tamilnād; or of 631 modern Mysore, Kerala and Madras States. Today the Nilgiris form one small 101 administrative District of Madras State. They are the homeland of the Badaga, Toda, Kota and Kurumba communities; nowadays many other peoples also live there.

The plateau is generally in the altitude range of 6000-8000 feet, and one ●133 peak (among the highest in peninsular India) reaches 8640 feet. In contrast with this the western quarter of the District averages around 3000 feet in altitude, and 128 forms a part of the Wynaad Plateau. In this study I use the term Nilgiris in its geographical sense rather than its political one, thereby excluding the Wynaad when I speak of the Nilgiris.

133 The slopes of the Nilgiri Plateau fall away very steeply, and on the eastern edge actually drop some 6000 feet in a distance of less than two miles. The slopes 137 have always been covered by a dense subtropical jungle which harbors tigers, leo- 136 pards, wild buffaloes, elephants, snakes, malarial mosquitoes, and (formerly 115 dangerous) hunting tribes still feared for their sorcery. Until the advent of the

6: Noble K-4,5 (1962-1963) 1989
(1800-1963)

AW50 Badaga AW50
Kota AW55
Kurumba AW56
Toda AW60
Madras Tribes AW63
Kasuva

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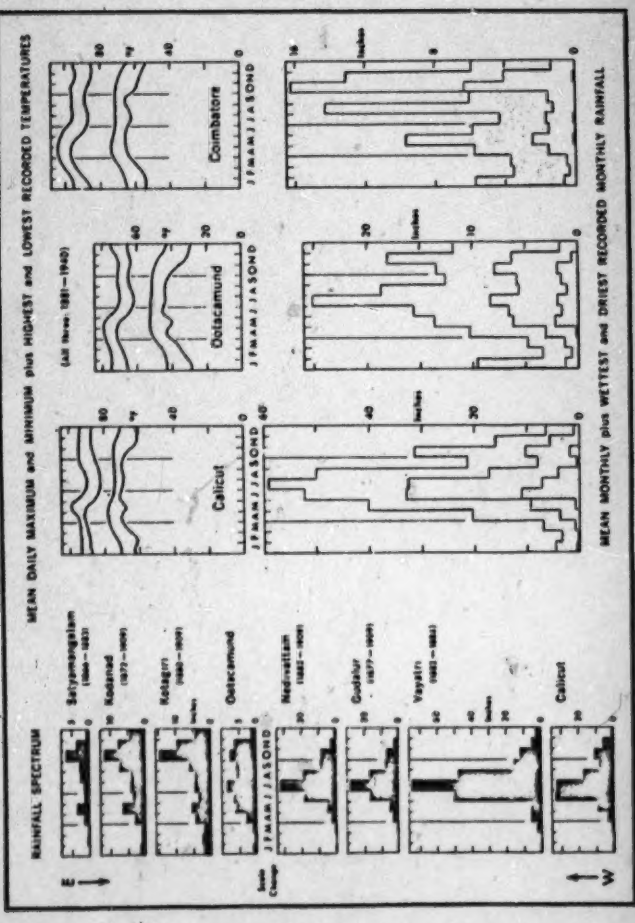

Figure 4.

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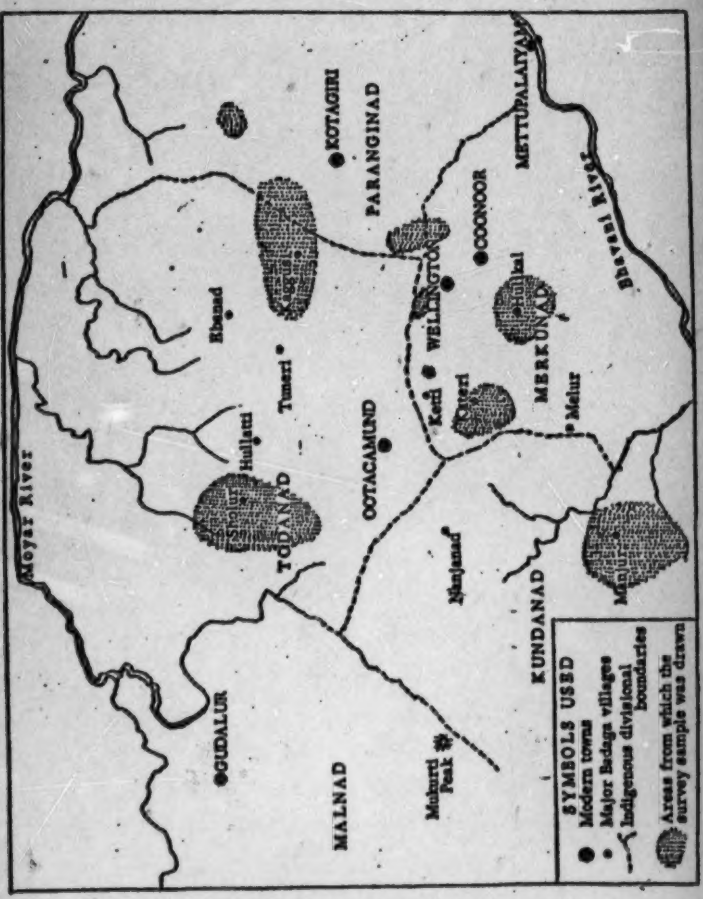

DIAGRAM II: MAP OF THE NILGIRI PLATEAU

103 by a Toda of that name. (A much more likely derivation is from male, meaning "mountain" in Badagu.) It was a wasteland of jungles which under the British administration was opened up to tea and coffee planters, and came to be called Wynaad. Badagas also use the term Malnad (mal a·ṛ, in Toda) to include the western slopes and mountainous ridge of the Nilgiri Plateau (cf. Burrow & Emeneau 1961: 314). Because the Wynaad is geographically so isolated from the Nilgiris, 184 the Badagas living there operate a separate and rather different system of village 121 government than that existing on the plateau. (We shall not be concerned with their social organization in this study. They are briefly described in Ranga 1934: 25-28.)

631 (103) The next largest of these political divisions is Todanad, so named because it is mostly the domain of the Todas. This land lies in the western half of the plateau, immediately to the east of Malnad.

In the north-eastern sector of the plateau is Paranginad, a name commonly shortened to Parangad. This division has relatively few Todas, but a thick concentration of Badagas and quite a number of Irula and Kurumba settlements at the lower elevations.

(103) To the south of Paranginad lies another division with a heavy population of Badagas but very few Todas, Merkunad (meaning "Western District").

Directly to the west of Merkunad and on the southern edge of Todanad (166) lies the smallest of these divisions, Kundenad, generally called Kunda. This is apparently the most recently settled of all the divisions, for it alone is not recorded as a division in the earliest British writings about the Nilgiris (Ward 1821: lxi). (133) The terrain is very hilly there, and it was only in the last century that the pressure for land in the rest of the plateau was sufficient to encourage Badaga

6: Noble K-4,5 (1962-1963) 1989
(1800-1963)
AW50 Badaga AW50
Toda AW60

ABSTRACT

The Nilgiri District, east of Calicut, India, is dominated by a higher than 6,000-foot massif commonly called the Nilgiris. The northwestern section of the District extends onto the lower Mysore Plateau and the northern section lies in the Mysore Ditch, a broad valley. This study is a survey of how five ethnic groups, the Badagas, Irulas, Kotas, Kurumbas, and Todas, have interacted with neighbors and utilized landscapes within the Nilgiri District. The historical perspective is employed throughout.

The study is based upon an occupance concept in which men are treated as 1) makers of cultural products termed occupance forms, 2) landscape utilizers who alter landscapes to varying degrees, 3) generators of inter-human economic activities, and 4) employees in economies generated by outsiders to their own small cultures. The outstanding characteristics of resultant dynamic cultural complexes, termed occupance patterns, are described. Because dwellings and temples proved to be particularly useful cultural indicators, they were classified according to exterior characteristics and the functional arrangements of their interiors. It also became necessary to employ an agricultural classification system with the three divisions of dry fields, wet fields, and gardens.

Todas living mainly on the northwestern upper Nilgiris are differentiated from the other ethnic groups by their barrel-vaulted,

6: Noble K-4,5 (1962-1963) 1989
(1800-1963)
AW50 Badaga AW50
Kota AW55
Kurumba AW56
Toda AW60
Madras Tribes AW63
Kasuva

CHAPTER I

INTRODUCTION

121 Little was known of the people inhabiting the Nilgiri District, southern India, until Francis Buchanan visited the District in 1800. Since that time, five ethnic groups have been mentioned repeatedly in the writings of other visitors to the District. Using the interrelated criteria of occupance patterns, occupance forms, and economies, this study surveys and analyzes the cultural contrasts and similarities exhibited by the five groups. Because significant changes have occurred since 1800, the historical perspective is applied to the three criteria whenever possible. A study in depth, by its very nature, contributes to an understanding of factors causing cultural contrasts and similarities among the five ethnic groups in the early 1800s, and of factors leading to changes since then.

1. The Study Region and Five Ethnic Groups

131 (101) (631) The study region. The Badagas, Irulas, Kotas, Kurumbas, and Todas, who form the main subjects of this study, live within the Nilgiri District of Madras State. The District lies approximately west-southwest from Madras city, the capital of Madras State, and is less than 50 miles east of Calicut, the southern Indian port reached by Vasco da Gama in 1498 (Figure 1). The Nilgiri massif, with several peaks higher than 8,000 feet, dominates much of the District. However, a part of the District extends over the Wynaad Plateau to

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[TEXT CONTINUED ON PAGE 3]

131 the northwest and into a broad valley called the Mysore Ditch to the
133 north. The eastern slopes of the Nilgiri massif rise above the Central Plain of peninsular India, and the western slopes rise above Malabar plains. The Wynaad Plateau, partially bordered by Western Ghats mountains, lies above the Malabar plains and emerges with the Mysore Plateau to the northeast. The Nilgiri District is bordered by Mysore and
177 Kerala states, and the general region wherein the District lies has
(131) long been a contact zone where Kannada-speaking, Malayalam-speaking, and Tamil-speaking southern Indians have met and, on occasion, fought. Despite past wars, nominal control by different rulers, and the fact that the Nilgiri region is near some of the Malabarian ports associated with earliest European contacts, the region had remained relatively isolated until Englishmen started to settle on the Nilgiri massif in the early 1820s.

The English first used the massif as a health resort, but they later established many coffee and tea plantations in the Nilgiri District. The District is now the leading tea growing region and the fifth ranking coffee growing region in southern India (United Planters Association of Southern India 1960: 390). Ootacamund, in the middle
177 of the Nilgiri massif, grew into the central administrative and resort
631 city with over 50,000 people in 1961. The next two cities in size are Coonoor (over 30,000) to the southeast and Kotagiri (over 15,000) to the east of Ootacamund. Both are early resort centers which even-
631 tually also served the needs of the coffee and tea industries. Smaller Gudalur (over 8,000), in the northwestern portion of the District, is the administrative center for the Nilgiri Wynaad and caters to local

6: Noble K-4,5 (1962-1963) 1989
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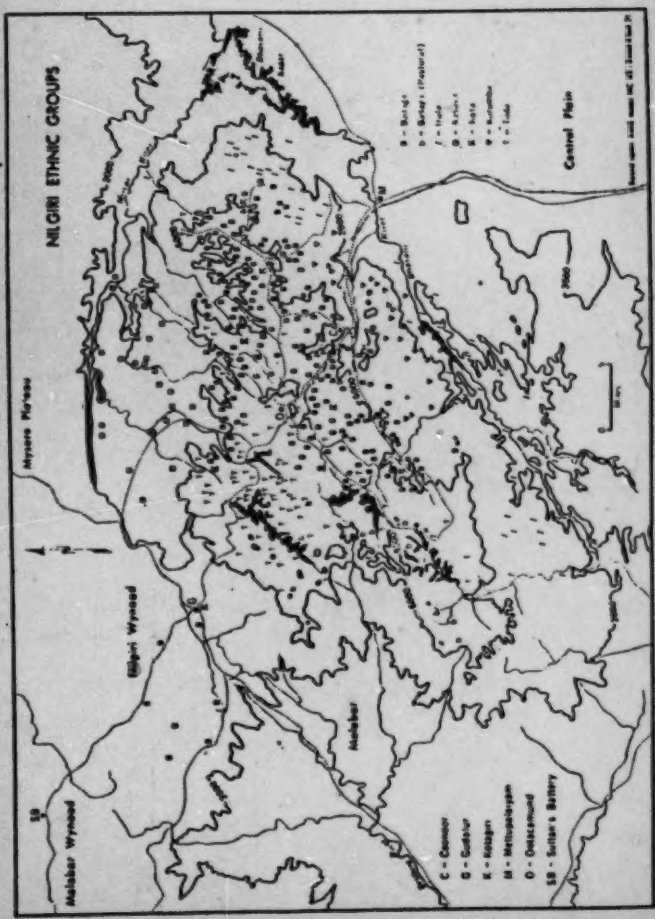

Figure 2.

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CHAPTER II

THE PHYSICAL BASE

133 The Nilgiris, which are geologically related to adjoining regions, form the largest and generally highest southern Indian massif. Resultant orographic influences lead to considerable variation in climate, soils, and vegetation from Malabar plains to the Central 121 Plain. Because the Nilgiris thus form but a part of a physical con- 128 tinuum, their relationships to adjacent regions are outlined in this chapter under the headings of geology and physiography, climate, soils, and vegetation.

1. Geology and Physiography

133 Excepting recent sedimentaries along coastal Malabar, the Nilgiris and adjacent regions are dominated by Precambrian Archaean rocks ranging in age from earliest Dharwars to later granites (Hayden and Hatch 1904: 10-18, Plate IV; Krishnan 1954: 175-177; Krishnan 1958a: 61; Krishnan 1958b: 72; Muthuswami 1930: 86-87; Iyer 1929: 121-123, 133-134; Pascoe 1950, 1:35-36; Thiagarajan 1962: 306-307). The Nilgiri massif and other massifs in extreme southern and eastern peninsular India are largely composed of Charnockitic intrusions (Figure 3). Rocks of the Charnockite Suite are associated with charnockite, a peculiar hyperathene quartz felspar rock.[1] In the Nilgiri and other regions steeply dipping charnockite and related

[p. 16]

[TEXT CONTINUED ON PAGE 18]

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6: Noble K-4,5 (1962-1963) 1989
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Figure 3.

6: Noble K-4,5 (1962-1963). 1989
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Toda AW60
Madras Tribes AW63
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133 gneisses or schists conform to large-scale rock foliation varying in direction from northeast to east-west to northwest. An older Dharwarian orogeny with a general northwesterly trend and especially a later Eastern Ghat (mountain range) orogeny with a general northeasterly to east-west trend, dating to the Precambrian period, are believed to be largely responsible for the widespread rock foliation (Aswathanarayana 1956: map opposite 24; Aswathanarayana and Mahadevan 1955: 73-74). The Nilgiri massif and other massifs farther south are located in a zone affected by both orogenies. The highest peaks in southern India, including over 20 peaks in the Nilgiris with elevations over 8,000 feet, rise in the same zone. It is conjectured that as erosion continued in this zone, and tremendous masses of overburden were removed, Charnockitic blocks became horsts rising between fault lines created by past vertical plus horizontal pressures (Fermor 1936: 48-51). Presence of the highest peaks parallel to and near the Malabar coast is perhaps the result of isostatic rise in response to down faulting of several 1,000 feet off the Malabar coast during the Miocene (Krishnan 1953: 87, 89; Krishnan 1960: 78). The same process may also be responsible for the tilting of the Deccan and Mysore plateaus toward the east.

The Nilgiri massif appears to be a jointed triangular block tilted toward the east (Figures 1 and 3). Outer slopes are generally steep, and some western slopes form spectacular escarpments falling away from peaks rising above 8,000 feet to a Malabar plain which is less than 500 feet high. Rivers, such as the Coonoor, Kundah, Pykara, and Upper Bhavani, have cut gorges into the outer slopes. One of

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One of these gorges, forming the Coonoor Pass, was used as the route for the only railroad and a main road leading to the upper Nilgiris. Above 6,000 feet terrain tends to be more gently sloped, but cannot be said to form a plateau. Above 7,000 feet there are rolling, hilly uplands interspersed with prominent peaks or ranges. Dodabetta (8,640 feet) in the central Nilgiris is the highest peak, but the majority of peaks over 8,000 feet in elevation (including Mukerti, 8,380 feet) are located in the western Kundah ranges. The summit hills and mountains are characteristically eroded into rounded features.

Water from most Nilgiri streams and rivers drains into the eastward flowing Bhavani and Moyar rivers, located to the south and north of the Nilgiri massif. Because the two rivers have such straight courses, they may perhaps be flowing along fault lines from which the southern and northern Nilgiri slopes have been eroded back. A portion of the Moyar River flows through a gorge, and the Moyar is also associated with a broader valley eroded into the Mysore Plateau. The broader valley now separating the Nilgiri massif from the Mysore Plateau to the north is called the Mysore Ditch.

The Wynaad Plateau, which spreads northwestward from the high Nilgiris, is an extension of the intermontane Mysore Plateau. Outer slopes of the Wynaad Plateau are steep, and Charnockitic mountains (Camel's Hump, for example) rising to elevations above 7,000 feet form Western Ghats ranges running along the Plateau's edge. With the exception of scattered peaks and ranges, rolling hills less than 500 feet high cover much of the Plateau. Its surface lies below 4,000 feet and decreases in elevation toward the north and east. Lower

133 elevations are associated with slope of land to the eastward flowing Kabbani River, a tributary of the Cauvery. In portions of the Wynaad Plateau where drainage is poor, many swamps were formed in the valleys between hills. The Mysore Plateau, bordering the Mysore Ditch, extends eastward to the Biligiri Rangan Hills and other Eastern Ghats ranges (Figures 1 and 3).

Because the discontinuous Eastern Ghats Charnockitic mountains are lower than those of the Western Ghats, and the Central Plain next to the mountains lies at an elevation of over 1,000 feet, the eastern edge of the Mysore Plateau in some places drops off gradually to the Central Plain. This plain, sloping gently eastward from the Nilgiri massif, has a flat surface occasionally interrupted by granitic hills. The Bhavani and Noyil rivers flowing across the Central Plain eventually join the eastward flowing Cauvery. From the southwestern Nilgiris, mountain ranges rising no higher than 6,550 feet run southward to the Palghat Gap, which is the most prominent gap in the mountains of peninsular India. Very flat to hilly plains in Malabar, west of the Nilgiri massif and Western Ghats ranges, generally lie below 500 feet. However, between the westward flowing Beypore and Ponnani rivers there is a higher hilly plain interrupted by several Charnockitic peaks rising above 1,500 feet.

2. Climate

132 The Nilgiri and adjacent regions are influenced by four general seasons--1) the drier season extending from December through March; 2) the hot season with mango showers in April and May; 3) the wet

134 enough rainfall to ensure leaching naturally help. Evaporation combined with upward capillary movement of water evidently play a vital role in pisolitic laterite formation. Downward and upward water flushing appears essential to vermicular laterite formation in Malabar. This flushing is brought about mainly by fluctuations in groundwater from season to season. Once vermicular laterite has formed, it in turn will aid in drainage and water storage. Rainwater on sections underlain by vermicular laterite drains below the surface rapidly. [133] Because this type of laterite contributes to water retention, rivers and streams continue to flow throughout the dry season (Lake 1891: 237; Logan 1887, 2:33).

133 134 Although higher elevations temper climate, tropical influences remain strong in mountain and plateau regions. Weathered rock in even the highest parts of the Nilgiris often forms a 40 to 50 foot mantle, and borings at the Sandy Nala dam (close to 7,000 feet) indicated a mantle thickness of 130 feet (Krishnan 1958b: 177). There are also many exposures of parent rock, especially on ridge tops. Due to downward erosion of sediments, landslides, and soil-creep, weathered debris plus soils accumulate toward valley bottoms. Thus, soils tend to be thicker on or near valley bottoms and thinner upslope. 134 Laterization is responsible for the prevalent red, brown, and yellow soils of greatly varying thicknesses. There are also scatterings of pisolitic laterite (Benza 1835: 417-419; Blanford 1859: 221, 235-237; Grigg et al. 1880: 464). Although there may be some localized occurrences, no clear-cut evidence exists for the presence of vermicular laterite on the Nilgiris.[4]

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6: Noble K-4,5 (1962-1963) 1989
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Figure 5.

137 If imported species continue to be planted, they may some day be the dominant vegetative forms on the upper Nilgiris.

Temperate grassland formation. Annual fires set by men have
137 certainly contributed to grassland formation on the upper Nilgiris.
318 There is much historical evidence for the burning of old, tough, dried grasses to promote the growth of young, tender grass more edible for livestock (Appendix C). Badagas, Kotas, Todas, Cannarese, Malayalees, and Tamilians inhabiting the upper Nilgiris still burn grasses annually. Firing of grasslands is such a deeply ingrained practice that the Madras Forest Department encounters many difficulties in trying to enforce laws to protect forested or planted tracts. A record dating to A. D. 1117 contains the earliest mention of a Nilgiri ethnic group (Derrett and Duncan 1957: 47). The Todas referred to were in all likelihood pastoralists who fired grasses annually. If one thinks in terms of grasslands being burned over annually for centuries and possibly millennia, it is not difficult to envision grasslands expanding at the expense of adjacent forests. Every time flames cross grassy areas and reach shola edges they do some damage to trees. In turn, damaged trees are more easily attacked by diseases and insects. Slowly, through the years, trees along shola edges perish and grasses can then advance a little more.

Terrain on the upper Nilgiris is conducive to fire spread, for
133 the region is characteristically eroded into rounded highland hills
(134) and mountains. Whenever forests are destroyed, sheet erosion removes
132 soil, and relief features then tend to become more rounded. Although

6: Noble K-4,5 (1962-1963) 1989
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CHAPTER VI

NILGIRI WYNAAD BADAGAS AND KOTAS

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The few scattered Badaga communities in the Nilgiri Wynaad have resulted from slow and continuing Badaga colonization which may extend back to a pre-1800 date. The ancestors of Kotas occupying a single hamlet probably came to serve the Todas who once lived in the Wynaad. Although Nilgiri Wynaad Badagas and upper Nilgiri Badagas are culturally affiliated, the occupance patterns related to them vary (Table IV). Several factors are responsible for the variations: Because the Wynaad is covered by a plateau with rolling hills and occasional ranges, topographic conditions are ideal for growing wet rice in broad valleys and dry field crops on hills. The climate is warm enough to permit the growth of wet rice, but too dry for two rice crops to be harvested annually from a single field. Dry seasonal conditions, reflected by estivating trees, also lead to the growth of only one dry field crop per year. Combined with the physical influences are the Malabarian, Malayalee cultural influences. Thus, Badaga house construction, employment of Paniya laborers, garden maintenance, and manner of wet rice cultivation with aid of implements drawn by buffaloes follow patterns associated with their neighbors. Kalac Kotas at Gudalur, who live in atypical houses and have lost their dry fields, continue to cultivate wet rice in the same manner as the Badagas. Nilgiri Wynaad Kota trades are similar to those of upper Nilgiri Kotas.

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Figure 1. Index maps